

Amendments to the Claims

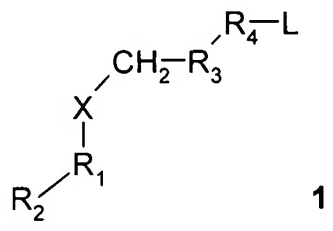
1. (Cancelled)

2. (Currently amended) The compound of formula 1 according to claim 1, wherein

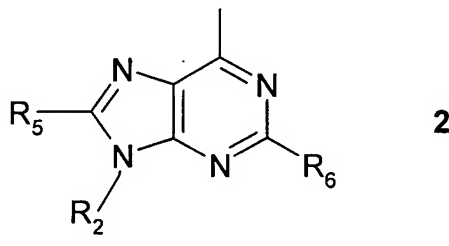
~~R₁ is a heteroaromatic group containing 1 to 5 nitrogen atoms;~~

~~R₂ is hydrogen, alkyl of 1 to 10 carbon atoms, or a saccharide moiety;~~

A compound of formula 1



wherein R₁-R₂ is a radical of formula 2



wherein R₂ is hydrogen, alkyl of 1 to 10 carbon atoms, or a saccharide moiety;

R₅ is hydrogen, halogen, trifluoromethyl, or hydroxy; and

R₆ is hydrogen, hydroxy or unsubstituted or substituted amino;

and tautomeric forms thereof;

X is oxygen or sulfur;

~~R₃ is phenyl, an unsubstituted or substituted mono or bicyclic heteroaryl group of 5 or 6 rings atoms comprising zero, one, two, three or four ring nitrogen atoms and zero or one oxygen atom and zero or one sulfur atom, with the proviso that at least one ring carbon atom is replaced by a nitrogen, oxygen or sulfur atom, 1-alkenyl, 1-alkynyl, 1-cyclohexenyl with 3 to 7 carbon atoms, or an optionally substituted unsaturated heterocyclyl group with 3 to 12 atoms and 1 to 5 heteroatoms selected from nitrogen, oxygen and sulfur, and a double bond in the position connecting the heterocyclyl group to methylene CH₂;~~

R₃ is triazolylene, tetrazolylene, isoxazolylene, thienylene, isoxazolidinylene, or alkynylene, wherein a double bond or the triple bond, respectively, is connected to CH₂;

R₄ is an optionally substituted straight or branched chain alkylene group with 1 to 300 carbon atoms, wherein optionally

- (a) one or more carbon atoms are replaced by oxygen
- (b) one or more carbon atoms are replaced by nitrogen carrying a hydrogen atom, and ~~the adjacent carbon atoms are~~ an adjacent carbon atom is substituted by oxo, representing an amide function -NH-CO-;
- (c) one or more carbon atoms are replaced by oxygen, and ~~the adjacent carbon atoms are~~ an adjacent carbon atom is substituted by oxo, representing an ester function -O-CO-;
- (d) the bond between two adjacent carbon atoms is a double or a triple bond, representing a function -CH=CH- or -C≡C-;
- (e) one or more carbon atoms are replaced by a phenylene, a saturated or unsaturated cycloalkylene, a saturated or unsaturated bicycloalkylene, a bridging heteroaromatic or a bridging saturated or unsaturated heterocyclyl group; and/or
- (f) two adjacent carbon atoms are replaced by a disulfide linkage -S-S-; and

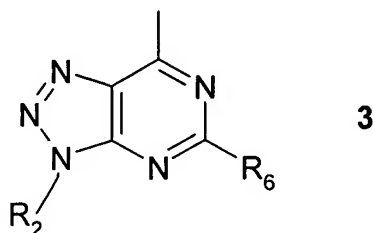
L is one or a plurality of same or different labels selected from a spectroscopic probe, a magnetic probe, a contrast reagent, a ~~molecule~~ moiety which is one part of a specific binding pair which is capable of specifically binding to a partner, ~~a molecule that is suspected to interact with other biomolecules, a library of molecules that are suspected to interact with other biomolecules, a molecule which is capable of crosslinking to other molecules,~~ a molecule moiety which is capable of generating hydroxyl radicals upon exposure to H₂O₂ and ascorbate, a ~~molecule moiety~~ which is capable of generating reactive radicals upon irradiation with light, a ~~molecule moiety~~ covalently attached to a solid support, a nucleic acid moiety or a derivative thereof capable of undergoing base-pairing with its complementary strand, a lipid or other hydrophobic ~~molecule moiety~~ with membrane-inserting properties, ~~a biomolecule with desirable enzymatic, chemical or physical properties,~~ a bond connecting R₄ to R₁ forming a cyclic substrate, and a further group - R₃-CH₂-X-R₁-R₂.

3. (Cancelled)

4. (Currently amended) The compound of formula 1 according to claim 3 2, wherein the saccharide moiety R₂ is a β-D-2'-deoxyribosyl, or a β-D-2'-deoxyribosyl being incorporated into a single stranded oligodeoxyribonucleotide having a length of 2 to 99 nucleotides, wherein the ~~guanine derivative R₁~~ radical of formula 2 occupies any position within the oligonucleotide sequence.

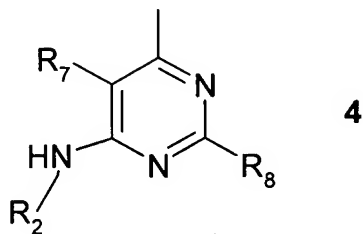
5. (Currently amended) The compound of formula 1 according to claim 3 2, wherein R₂ is hydrogen, R₅ is hydrogen, R₆ is unsubstituted amino, and X is oxygen.

6. (Withdrawn) The compound of formula 1 according to claim 1, wherein R₁-R₂ is a radical of formula 3



wherein R₂ is hydrogen, alkyl of 1 to 10 carbon atoms, or a saccharide moiety; and R₆ is hydrogen, hydroxy or unsubstituted or substituted amino; and tautomeric forms thereof.

7. (Withdrawn) The compound of formula 1 according to claim 1, wherein R₁-R₂ is a radical of formula 4



wherein R₂ is hydrogen, alkyl of 1 to 10 carbon atoms, or a saccharide moiety; and R₇ and R₈ are both independently of one another hydrogen, halogen, lower alkyl with 1 to 4 carbon atoms, amino, or nitro.

8. (Currently amended) The compound of formula 1 according to claim 1 2, wherein R₃ is triazolylene, tetrazolylene, isoxazolylene, thienylene, or isoxazolidinylene.
9. (Currently amended) The compound of formula 1 according to claim 8 wherein R₃ is triazolylene.
10. (Currently amended) The compound of formula 1 according to claim 8 wherein R₃ is tetrazolylene.
11. (Currently amended) The compound of formula 1 according to claim 8 wherein R₃ is isoxazolylene.
12. (Currently amended) The compound of formula 1 according to claim 8 wherein R₃ is thienylene.
13. (Currently amended) The compound of formula 1 according to claim 8 wherein R₃ is isoxazolidinylene.
14. (Currently amended) The compound of formula 1 according to claim 1 2, wherein R₃ is 1-alkynylene.
15. (Currently amended) The compound of formula 1 according to claim 1 2, wherein R₄ is a straight chain alkylene group with 2 to 25 carbon atoms, a straight chain polyethylene glycol group with 4 to 100 ethyleneoxy units, or a straight chain alkylene group with 2 to 25 carbon atoms wherein two or more carbon atoms are replaced by an amide function –NH–CO–, optionally attached to the group R₃ by a –CH=CH– or –C≡C– group.
16. (Currently amended) The compound of formula 1 according to claim 1 2, wherein R₄ is a branched chain alkylene group comprising a polyethylene glycol group of 3 to 6 ethylene glycol units and one or more alkylene groups wherein carbon atoms are replaced by amide bonds, and further carrying substituted amino and hydroxy functions.

17. (Currently amended) The compound of formula 1 according to claim 1 2, wherein R₄ is a branched chain alkylene group having a dendritic structures, wherein amine, carboxamide and ether functions replace carbon atoms of the alkylene group.

18. (Currently amended) The compound of formula 1 according to claim 3 2, wherein R₃ is ~~phenylene~~ and L is a further group -R₃-CH₂-X-R₁-R₂.

19. (Currently amended) The compound of formula 1 according to claim 3 2, wherein R₃ is ~~1,4-phenylene~~ and linker R₄ is a straight chain alkylene group of 10 to 40 carbon atoms wherein 3 to 12 carbon atoms are replaced by oxygen, one or two carbon atoms are replaced by 1,4-triazolidene units, and optionally one carbon atom is replaced by a 1,4-phenylene unit.

20. (Currently amended) The compound of formula 1 according to claim 3 2, wherein R₃ is ~~1,4-phenylene~~ and linker R₄ is a straight chain alkylene group of 10 to 40 carbon atoms optionally substituted by oxo wherein 3 to 12 carbon atoms are replaced by oxygen and one or two carbon atoms are replaced by nitrogen.

21. (Currently amended) The compound of formula 1 according to claim 3 2, wherein R₃ is ~~1,4-phenylene~~ and linker R₄ is a straight chain alkylene group of 6 to 40 carbon atoms wherein 2 to 12 carbon atoms are replaced by oxygen and one or two bonds between two adjacent carbon atoms is a double bond.

22. (Currently amended) The compound of formula 1 according to claim 3 2, wherein R₃ is ~~phenylene~~, R₆ is amino and L is a bond connecting R₄ to R₆.

23. (Currently amended) The compound of formula 1 according to claim 3 2, wherein R₃ is ~~phenylene~~ and L is methotrexate.

24. (Currently amended) The compound of formula 1 according to claim 3 2, wherein R₃ is ~~phenylene~~ and L is a plurality of same or different labels.

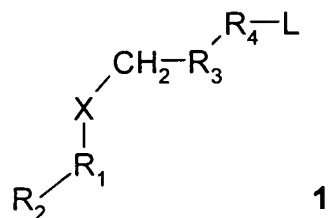
25. (Currently amended) The compound of formula 1 according to claim 24, wherein R_3 is phenylene and L is two different labels.

26. (Cancelled)

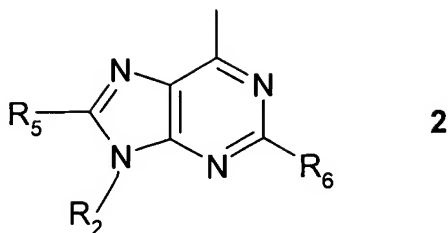
27. (Currently amended) A method ~~according to claim 26~~ for the synthesis of a compound of the formula 1 according to claim 2, characterized in that which comprises reacting a compound of the formula $R_2-R_1-X-CH_2-R_3-R_4$, wherein R_1 , R_2 , R_3 and X have the meaning as defined in claim 2 and R_4 is a polyfunctional residue having two or more reactive nucleophilic or electrophilic groups, ~~is reacted~~ with a suitable reagent introducing one or more labels L.

28. (Currently amended) A method according to claim 27 wherein the reactive nucleophilic or electrophilic groups ~~are orthogonally protected functional groups, and conditions are chosen such as to allow separate deprotection so that each released functionality in turn can be further chemically manipulated either to attach a label to it or for the introduction of further extension of linker R_4~~ carry separately deprotectable protection groups, one protection group is separately deprotected and a label attached to it or the linker R_4 further extended, another protection group is separately deprotected and a label attached to it or the linker R_4 further extended, and the steps of deprotection and label attachment or linker extension repeated depending on the number of protected reactive nucleophilic and electrophilic groups.

29. (Currently amended) A compound of the formula 1



wherein R_1-R_2 is a radical of formula 2



wherein R_2 is hydrogen, R_5 is hydrogen and R_6 is unsubstituted amino;

X is oxygen;

R_3 is triazolylene, tetrazolylene, isoxazolylene, thienylene, isoxazolidinylene or alkynylene;

wherein a double bond or the triple bond, respectively, is connected to CH_2 ;

~~R_4 is a linker; R_4 is an optionally substituted straight or branched chain alkylene group with 1 to 300 carbon atoms, wherein optionally~~

(a) one or more carbon atoms are replaced by oxygen

(b) one or more carbon atoms are replaced by nitrogen carrying a hydrogen atom, and an adjacent carbon atom is substituted by oxo, representing an amide function $-NH-CO-$;

(c) one or more carbon atoms are replaced by oxygen, and an adjacent carbon atom is substituted by oxo, representing an ester function $-O-CO-$;

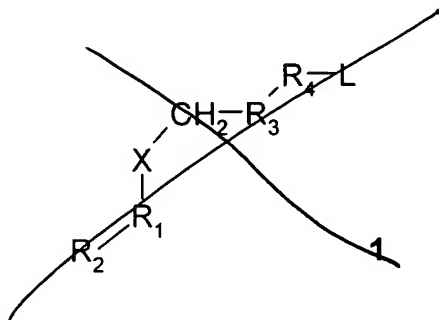
(d) the bond between two adjacent carbon atoms is a double or a triple bond, representing a function $-CH=CH-$ or $-C\equiv C-$;

(e) one or more carbon atoms are replaced by a phenylene, a saturated or unsaturated cycloalkylene, a saturated or unsaturated bicycloalkylene, a bridging heteroaromatic or a bridging saturated or unsaturated heterocyclyl group; and/or

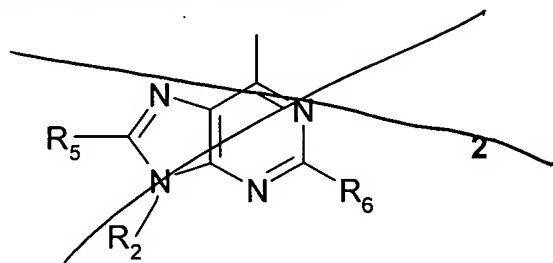
(f) two adjacent carbon atoms are replaced by a disulfide linkage $-S-S-$; and

L is amino or azido.

30. (Currently amended) A compound according to claim 29
of the formula 1



wherein R_1 - R_2 is a radical of formula 2



wherein R_2 is hydrogen, R_5 is hydrogen and R_6 is unsubstituted amino;

X is oxygen;

R_3 is 1,4-phenylene;

R_4 is a straight chain alkylene group of 10 to 40 carbon atoms optionally substituted by oxo wherein up to 12 carbon atoms are replaced by oxygen and zero, one or two carbon atoms are replaced by nitrogen; and

L is amino or azido.

31. (Currently amended) A method for detecting and manipulating a protein of interest, characterized in that the protein of interest incorporated into a which comprises contacting an AGT fusion protein comprising the protein of interest ~~is contacted~~ with an AGT substrate carrying a label, and detecting and optionally further manipulating the AGT fusion protein is ~~detected and optionally further manipulated~~ using the label in a system designed for recognising or handling the label, and wherein the AGT substrate carrying the label is a compound of formula 1 according to claim 2 1.